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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/712,207	11/12/2003	Rajesh Shah	P17145	8273

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EXAMINER

SEYE, ABDOU K

ART UNIT	PAPER NUMBER
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2194

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/26/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/712,207

Applicant(s)

SHAH ET AL.

Examiner

Abdou Karim Seye

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 October 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119


- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
- Paper No(s)/Mail Date See Continuation Sheet.

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____


WILLIAM THOMSON
ASSISTANT PATENT EXAMINER

DETAILED ACTION

1. This is the initial office action based on the application filed on November 12, 2003. Claims 1-40 are currently pending and have been considered below.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter that the applicant regards as his invention.

Claims 10, 13, 23, 25, 37 and 40 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Appropriate clarification is required on the following claims:

Claims 13, 25 and 40 contain the trademark/trade name "iSCI" and "TCP". Where a trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of 35 U.S.C. 112, second paragraph (*see Ex parte Simpson*, 218 USPQ 1020; Bd. App. 1982). The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product. A trademark or trade name is used to identify a source of goods, and not the goods themselves. Thus, a trademark or trade name does not identify or describe the goods associated with the trademark or trade name. In the present case, the trademark/trade name is used to identify/describe a family of products generated

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in the proprietary software product called "iSCI", "TCP" and, accordingly, the identification/description is indefinite.

Claims 10, 23 and 37, a definiteness problem arises when the word "less than" is used in these claims. Therefore the examiner rejects these claims for lack of definiteness.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 14-25 and 28-40 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 14-25 and 28-40 are non statutory. The claimed system and article of manufacture are constructed of software program instructions. Thus, the claimed product comprising of initializing a device interface driver and the device hardware; accessing the device hardware; generating one device object and reporting the determined device to the operating system is considered as software program containing machine-executable instructions, per se (and not associated with any physical structure). The claimed system comprising of a processor, an operating system,

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a network adaptor, a device driver is considered as software program and not stored within any physical structure. See MPEP 2106.01 - I: "...computer programs claimed as computer listings per se, i.e., the descriptions or expressions of the programs, are not physical "things." They are neither computer components nor statutory processes, as they are not "acts" being performed. Such claimed computer programs do not define any structural and functional interrelationships between the computer program and other claimed elements of a computer which permit the computer program's functionality to be realized...".

In view of Applicant's disclosure, specification (see page 9, lines 26-31), the medium is not limited to physical articles or objects embodiments, instead being defined as including both physical articles or objects embodiments (e.g., CDs and DVDs) and non physical embodiments (e.g., data signals embodied in a carrier wave). The non physical embodiments are a form of energy. Energy does not fall into a statutory category of invention and therefore the claim is not statutory.

Also it appears that no tangible result is achieved from reporting the determined devices to the operating system.

Appropriate change is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-2, 4-15, 17-29 and 31-40 are rejected under 35 U.S.C. 102(b) as being anticipated by **kim, et al. (US 20020069245)**.

Claims 1, 14, 26 and 28, Kim teaches a method and system for interfacing with device hardware supporting a plurality of devices comprising:

initializing a device interface driver to represent the device hardware as a virtual bus to an operating system and to represent to the operating system each device supported in the device hardware as a device attached to the virtual bus (fig. 22, paragraph 113; fig. 20b, paragraph 110);

initializing the device hardware (fig. 16, paragraph 95);

accessing the device hardware to determine devices supported by the device hardware (fig. 16, paragraph 95; fig. 20b, paragraph 108);

generating one device object for each determined device supported by the device hardware, wherein each generated device object represents the determined device to the operating system (paragraph 108 and 112); and
reporting the determined devices to the operating system, wherein the operating system loads a device driver for each of the reported devices supported by the device hardware (fig. 22, paragraph 113, 115 and 116; fig. 10 paragraph 76).

Claim 2 and 15, Kim further teaches,

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reporting to the operating system that the determined devices are dependent on the virtual bus, wherein in response to being notified that the determined devices and virtual bus are dependent, the operating system will not remove the device interface driver representing the virtual bus until the device drivers associated with the determined devices are removed (fig. 22; paragraph 118; 127; 139).

Claims 4, 17 and 31, Kim teaches,

wherein the hardware device comprises a network adaptor and wherein each device available in the network adaptor supports a protocol engine for different communication protocols (fig. 24/701; paragraph 151, 152, 154 and 155; paragraph 47) .

Claims 5, 18 and 32, Kim further teaches,

wherein each protocol engine processes packets according to a communication protocol and a network protocol, wherein each transport engine supports a different communication protocol and uses a same network protocol (paragraph 47).

Claims 6, 19 and 33, Kim teaches,

receiving a packet from one device driver; determining a device queue in the device hardware queuing packets for the device supported by the device hardware corresponding to the device driver; and writing the received packet to the determined queue (paragraph 47, 73, 87, 91, 92 and 119; fig. 8 paragraph 67).

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Claims 7, 20 and 34, Kim teaches,

receiving notification from the device hardware concerning transmission of one packet; determining the device driver for the device in the network adaptor that processed the packet; and transmitting notification to the determined device driver indicating the notification received from the device hardware (paragraph 73 and 87; connection oriented protocol, TCP/IP can raise notifications for lost packets and retransmission and the identification of device driver). The element (TCP/IP) of Kim's reference meets these claimed limitations of the claim.

Claims 8, 21 and 35, Kim teaches,

receiving indication of a packet provided by the device hardware (packet id); determining the device driver for the device supported by the network adaptor that processed the provided packet (device driver ID); invoking a call to cause the determined device driver to process the provided packet (transfer request call) (fig. 14; paragraph 91 and 92).

Claims 9, 22 and 36, Kim teaches,

wherein all the device drivers access devices supported by the device hardware through the device interface driver (fig. 22, paragraph 113).

Claims 10, 23 and 37, Kim teaches ,

wherein the devices determined to be available in the device hardware comprise less than all the devices supported by the device hardware (paragraph 46,123 and 127 ;removing a device).

Claims 11, 24 and 38, Kim teaches,

in response to detecting a change in the configuration of devices supported by the device hardware, signaling the operating system of the changed configuration of devices available in the device hardware, wherein the operating system is capable of loading or unloading device drivers to support the changed configuration of devices available in the device hardware (paragraph 127).

Claims 12 and 39, Kim teaches ,

wherein the operations of initializing the device hardware, accessing the device hardware to determine devices supported by the device hardware , generating the device objects, and reporting the determined devices to the operating system are performed by the device interface driver (fig. 22, paragraph 113).

Claims 13, 25 and 40, Kim teaches,

wherein one device includes a protocol engine supporting the iSCSI protocol and TCP protocol (fig. 22/644; paragraph 73 and 85),

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wherein one device includes a protocol engine supporting an offloaded LAN protocol, and wherein one device includes a protocol engine supporting non-offloaded-LAN protocol (abstract; fig. 9 paragraph 70; fig. 10)

As per claims 27 and 29, they are rejected for the same reasons as claims 1 and 2 above.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103 (a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 3, 16 and 30 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Kim, et al. (US 20020069245) in view of Malueg et al. (US 20040003300).

Claims 3, 16 and 30, Kim teaches a system and method that includes initializing a device interface driver to represent the device hardware as a virtual bus to an operating system as in claim 1 above, but he does not explicitly disclose reporting to the operating system that a power state of the virtual bus represented by the device

interface driver cannot be altered until all the device drivers representing devices attached to the virtual bus have their power state similarly altered. However, in the same field of endeavor, Malueg discloses a power management architecture including a power manager application interface with function for registering device-specific power state. The power manager executes decision logic whether to altering or not alter power state of a device until certain requirements are met(abstract; paragraph 44; fig. 10, 11 and 12). It would be obvious to one having ordinary skill in the art at the time the invention was made to modify Kim's invention with Malueg's invention to use the power state manager decision making process to alter or not alter the power state of a virtual bus, because it would enable a number of diverse interests to be served including prolonging battery life, controlling heat creation. One would have been motivated to use a power state manager in order to avoid wasting energy while transmitting packed data to devices connected to a computer system.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to the applicant's disclosure.

Richman et al. (6003097) discloses System for automatically configuring a network adapter without manual intervention by using a registry data structure maintained within a computer system memory.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Exr. Abdou Seye whose telephone number is (571) 270-

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1062. The examiner can normally be reached Monday through Friday from 7:30 a.m. to 4:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, contact the examiner's supervisor, William Thomson at (571) 272-3718. The fax phone number for formal or official faxes to Technology Center 3600 is (571) 273-8300.

Draft or informal faxes, which will not be entered in the application, may be submitted directly to the examiner at (571) 273-6722.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group Receptionist whose telephone number is (571) 272-3600.

AKS
February 11, 2007


WILLIAM THOMSON
SUPERVISORY PATENT EXAMINER
William Thomson
Supervisory Patent Examiner

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :09/02/2005, 06/09/2005, 10/08/2004, 08/24/2006